

SHCHEPOT'YEVA, Ye.S.; ARDASHNIKOV, S.N.

Utilization of natural radioactive isotopes at health resorts  
and in other conditions for therapeutic purposes. Med.rad. 5  
no.6:3-11 '60. (MIRA 13:12)

(RADIOTHERAPY)

TRET'YAKOV, A. F.; SHCHEPOT'YEVA, Y. S.; FRENKLAKH, Kh. G.

Treatment of chronic eczema with radioactive bandages containing active substances of thoron decay products (alpha therapy). Vest. derm. i ven. 34 no.1:35-41 Ja '60. (MIRA 17:12)

1. Iz radiologicheskoy laboratorii (zav. - prof. Ye. S. Shchepot'yeva) Gosudarstvennogo nauchno-issledovatel'skogo instituta kurortologii i fizioterapii (dir. - kandidat meditsinskikh nauk G. N. Pospelova) i Klinicheskoy kozhno-venerologicheskoy bol'nitsy imeni Korolenko (glavnyy vrach A. I. Pustovaya).

(ALPHA RAYS—THERAPEUTIC USE) (ECZEMA)  
(THORIUM—THERAPEUTIC USE)

SHCHEPOT'YEVA, Yo.S.; ARDASHNIKOV, S.N.; LUR'YE, G.Ye.; RAKHMANOVA, T.B.

Specificity of the manifestation of oxygen effect under the action  
of alpha rays. Izv. AN SSSR. Ser. biol. no.4:642-652 J1-Ag '61.  
(MIRA 14:9)

1. Tsentral'nyy institut kurortologii i fizioterapii.  
(ALPHA RAYS---PHYSIOLOGICAL EFFECT)  
(PHYSIOLOGICAL CHEMISTRY)

TRET'YAKOV, A.F.; SHCHEPOT'YEVA, Ye.S.

Treatment of neurodermatitis circumscripta with radioactive bandages containing an active coating of daughter products of thorium (alphatherapy). Vestn. dermat. i ven. 72: 14-18, 1963.

(RRL 17:6).

1. Radiologicheskaya laboratoriya (zav. - prof. Ye.S. Shchepot'yeva)  
TSentral'nogo instituta kurdertologii i fizioterapii (dir. - kand.  
med. nauk. G.N. Pospelova).

SHCHEPTEV, N.F.; YUZHNAJA, Ye.A., redaktor; MEL'NIKOVA, N.V., tekhnredaktor.

[Equipment of peat enterprises and its care] Oborudovanie torflianykh  
predpriatii i ukhod za nim. Moskva, Gos. izd-vo mestnoi promyshl.  
RSFSR, 1954. 216 p. (MIRA 8:5)  
(Peat machinery)

BEZZUBOV, Nikolay Dmitriyevich; SOKOLOV, Aleksandr Alekseyevich; SHCHEPTEV,  
N.F., redaktor; VORONIN, K.P., tekhnicheskiy redaktor.

[Winning chunk peat with a MPDK machine] Dobycha kuskovogo torfa  
mashinoi MPDK. Moskva, Gos. energ. izd-vo, 1955. 95 p. (MLRA 9:4)  
(Peat machinery)

GALYBIN, N.A., inzh.; SHCHERBETEV, N.K., inzh.; KOLOTUSHKIN, V.I., red.; LANGE,  
V.I., red. izd-va; MEL'NIKOVA, N.V., tekhn. red.

[Organization of fuel depots] Organizatsiia toplivnykh skladov.  
Moskva, Gos. izd-vo mestnoi promyshl. RSFSR, 1955. 210 p.  
(Fuel--Storage) (MIRA 11:7)

SHCHEPTEV, N F

N/5  
735.19  
.351  
1955

SHCHEPTEV, N F

SPRAVOCHNIK MEKHANIKI TORFOPREDPRIYATITY I TORFOERIKETNYKH ZAVOKOV

(HANDBOOK FOR THE MECHANIC IN PEAT AND PEAT BRIQUETTE FACTORIES) 2. IZD.,

ISPR. I DOP. MOSKVA, ROSGIZMESTPROM, 1955.

471 P. ILLUS., DIAGRS., TABLES.



BEZZUBOV, Nikolay Dmitriyevich; SOKOLOV, Aleksandr Alekseyevich; SHCHEPTEV,  
N.F., redaktor; LARIONOV, G.Ye., tekhnicheskij redaktor

[The KDN-2 block peat machine] Dobycha kuskovogo torfa mashinai  
KDN-2. Moskva, Gos. energ. izd-vo, 1956. 68 p. (MIRA 10:1)  
(Peat machinery)

SHCHEPTEV, N.F.

Trends in the development and mechanization of the peat industry  
under the Ministry of the Fuel Industry of the R.S.F.S.R. Torf.  
prom.33 no.2:28-31 '56. (MLRA 9:6)

1. Glavnyy inzhener Glavnogo upravleniya torfyanoy i briketnoy  
promyshlennosti Ministerstva toplivnoy promyshlennosti RSFSR.  
(Peat machinery)

SHCHEPTEV, N.F., inzhener.

Use of the PK-3 loading crane in nonelectrified peat diggings. Torf.  
prom. 34 no. 1:37-38 '57. (MLBA 10:2)

1. Ministerstvo toplivnoy promyshlennosti RSFSR.  
(Cranes, derricks, etc.)

SHCHN Tol. . . . .

...for increasing the productivity of peat excavators in  
...of the fuel industry of the R.S.F.S.R. ...  
...-27 '57. (MIRA 1. 16)

...to ... RSPSR.  
(Peat ...)

SHCHAPTEV, N.F., inzh.; VOLOTSKOV, S.I., red.; LARIONOV, G.Ye., tekhn. red.

[Mechanization of heavy operations at small and middle-sized  
peat enterprises] Mekhanizatsiia trudoemkikh rabot na torfo-  
predpriyatiyakh maloi i srednei moshchnosti. Moskva, Gos. energ.  
izd-vo, 1958. 70 p. (MIRA 11:12)

(Peat machinery)

SHCHEPTEV, N.F., inzh.

Modernization of small peat-winning excavators. Torf. prom. no.1:29-32  
'58. (MIRA 12:12)

1.Gosplan RSFSR.  
(Peat machinery)

SHCHEPTEV, N.F.

Developments of the manufacture of peat briquets. Torf. prom. 35  
no.3:23-26 '58. (MIRA 11:5)

1. Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov RSFSR.  
(Peat) (Briquets (Fuel))

SHCHEPTEV, N.F., inzh.

E-156 universal excavator. Torf. prom. 36 no.5:31-32 '59.  
(MIRA 13:1)

1. Gosudarstvennyy nauchno-tekhnicheskii komitet RSFSR.  
(Peat machinery)



SHCHEPTEV, N.F., inzh.

New machinery for the preparation of milled peat fields. Torf.  
prom. 37 no.3:7-10 '60. (MIRA 13:9)

1. Gosudarstvennyy nauchno-tekhnicheskiy komitet RSFSR.  
(Peat machinery)

SHCHEPTEV, N.F., inzh.

Techniques of the peat briquet production. Torf. prom. 37  
no. 3:16-18 '60. (MIRA 14:1)

1. Gosudarstvennyy nauchno-tekhnicheskiiy komitet RSFSR.  
(Peat) (Briquets (Fuel))

SHCHEPTEV, N.F.

New equipment designed by the technical design bureaus of peat  
winning and transportation enterprises. *Biul.tekh.-ekon.inform.*  
no.7:21-22 '61. (MIRA 14:8)  
(Peat machinery)

SHCHAPTOV, N.F.

Over-all mechanization of winning cut peat operations. Biul.tekh.-  
ekon.inform. no.9:13-15 '61. (MIRA 14:9)  
(Peat machinery--Technological innovations)

SOCHLEPTEN, N.F.

Improving the equipment in peat-briquetting enterprises. Biul.tekh.-  
ekon.inform. no.11:10-13 '61. (MIRA 14:12)  
(Peat machinery)

SECHEPTEV, N.F.

Present state of scientific research and experimental works on the  
utilization of peat in metallurgy. Torf. prom. 38 no. 3:35-37 '61.  
(MIRA 14:4)

(Peat) (Metallurgy)

SECRET, N.F.

In the State Scientific and Technical Committee of the  
Council of Ministers of the R. S. F. S. R. Torf. prom.  
38 no.4:35-36 '61. (MIRA 14:9)  
(Peat industry)

SHCHEPTEV, N.F.

Seminar on better equipment for Russian peat briquet factories.  
Torf. prom. 38 no.5:36-37 '61. (MIRA 14:10)  
(Peat machinery)



SHCHEPTEV, N.F.

Over-all mechanization of peat transportation and handling.

Biul.tekh.-ekon.inform. no.1:16-19 '62. (MIRA 15:2)

(Peat machinery)

SECRETARY, N. F.

Organization of a scientific council for over-all utilization  
of peat and peat deposits. Biul.tekh.-ekon.inform.Gos.nauch.-  
issl.inst.nauch.i tekh.inform. no.3:70-71 '62. (MIRA 15:5)  
(Peat industry)

SHCHEPTEV, N.F.

The BPD-1 (2) peat-briquet double-die press without a bed. Biul.tekh.-  
ekon.inform.Gos.nauch.-issl.inst.nauch. i tekhn.inform. no.7:16-18  
'62. (MIRA 15:7)

(Briquets (Fuel)) (Power presses)

SHCHEPTEV, N.

Prospects of peat utilization in metallurgical plants.  
Torf.prom. 39 no.4:37-38 '62. (MIRA 15:7)  
(Peat industry)  
(Coke)

SHCHEPTEV, N. F.

Production of peat-moss litters and peat-mineral-ammoniac fertilizers for agriculture. Biul.tekh.-ekon.inform.Gos.nauch.-issl. inst.nauch. i tekhn.inform. no.10:55-59 '62.

(MIRA 15:10)

(Fertilizers and manures) (Peat)

SHCHEPTEV, V.F. (Moskva)

Private on constant watch. Zdorov'ie 7 no. 5:32 My '61.

(MIRA 14:4)

(MEDICAL CARE)

SHEPTEV, V.N.

SA

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9

3717. CALCULATION OF THE ELECTROMAGNETIC SYSTEM OF AN ELECTRIC CUTTING TOOL [ELECTRIC SPARK LATHE]. V.N. Sheptov. Elektricheskvo (No. 6) 26-30 June 1960) In Russian.

The author deals mainly with the solenoid drive which provides the working movement of the spark electrode. The movement is controlled according to the varying electrode spacing during the course of operation and should be kept constant as far as possible. A further difficulty is variation of the operating current, which again depends upon the electrode spacing. The solenoid current can be derived only from the operating current (this being the only possible means of automatic regulation). Further difficulty resides in the square-law relation between the attractive force of the solenoid and current, and the dependence of the force on the position of the core. The theory has enabled the existing method of electromagnetic control (due to A.I. Livshits and P.N. Rosenthal) to be improved.

I.F. Kraus

AS 6 514 METALLURGICAL LITERATURE CLASSIFICATION

22

VINOGRADOV, V.; SHCHERB, A.; YURIN, B.A., red.; KOROBova, N.D.,  
tekhn. red.

[The trade unions of Cuba; collected articles, addresses  
and materials] Profsoiuzy Kuby; sbornik statei, vystuplenii  
i materialov. Moskva, Profizdat, 1963. 166 p.  
(MIRA 17:2)



SHCHERBA, A.

Lida encounters. Rab. i sial. 36 no.1:12-13 Ja '60.  
(MIRA 13:5)

(Lida--Industries) (Women--Employment)

ACC NR: ARG035061

SOURCE CODE: UR/0058/66/000/008/H002/H002

AUTHOR: Shcherba, A. M.

TITLE: Frequency conversion in p-n junctions

SOURCE: Ref. zh. Fizika, Abs. 8Zh11

REF SOURCE: Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR, vyp. 27, 1965, 55-60

TOPIC TAGS: frequency conversion, pn junction, spectral distribution, amplitude distribution, nonlinear capacitance, nonlinear resistance, active component, reactive component

ABSTRACT: Spectral amplitude distribution of voltage combination components in a p-n junction is analyzed for the case when its equivalent circuit under frequency conversion conditions may be represented by the coupling of nonlinear capacitance and nonlinear active resistance. Expressions for cophasal and antiphase modulation of the active and reactive component of junction total conductivity are derived. [Translation of abstract] [DW]

SUB CODE: 12, 09/

Card 1/1

DOCHET NO. 17.1: "MIR" 17.10.

Experimental induction of the Ling. Resp. Anst. 1 anst. 7 no. 1:  
(MIRA 17.10,  
17.10 17.10 17.10.

1. 12 gospital'nyy polimorf'nyy kliniki (nachal'nik - gen. med.  
mayor meditsina v sluzhbu prof. I. S. Kolesnikov) Voenno-meditsins-  
koy ordena Lenina akademii imeni V. I. Lenin.

KOLESHNIKOV, I.S.; VIKHRYAYEV, B.S.; ZHIGHERBA, B.V.; KALFVIN, B.I.;  
PLESHCHAEV, V.T.

Differential diagnosis of lung cancer and abscess. Vop.onk. 11  
no.11:3-7 '65. (MIRA 19:1)

1. Iz kafedry gosital'noy khirurgii (zav. - laureat Leninskoy  
premi, chlen-korrespondent AMN SSSR, zasluzhennyy deyatel' nauki  
RSFSR prof.I.S.Kolesnikov) Voenno-meditsinskoy ordena Lenina  
akademii imeni S.M.Kirova.

SHCHERBA, F.I.; POGORELKO, I.P.

Use of an electrophoretic method with streptomycin and anesthetics in treating tuberculous and trophic lesions of the bladder. Sov. med. 18 no.9:32-33 S 54. (MLRA 7:11)

1. Iz fizioterapevticheskogo otdeleniya (zav. - prof. V.A.Ivanov) i urologicheskoy kliniki (dir. - prof. A.P.Frumkin) Tsentral'nogo instituta usovershenstvovaniya vrachey na baze Klinicheskoy ordena Lenina bol'nitsy imeni S.P.Botkina (glavnyy vrach - prof. A.N. Shabanov)

(BLADDER, diseases

trophic lesions, electrophoresis of streptomycin ther. & anesthetics)

(STREPTOMYCIN, therapeutic use

tuberc., venal & trophic lesions of bladder, electrophoresis)

(ANESTHETICS, therapeutic use

same)

(TUBERCULOSIS, RENAL, therapy

anesthetics & streptomycin electrophoresis)

SHCHERBA, F.I.; KOGAN, S.A.

▲ method of inductothermy in the treatment of diabetic polyneuritis.  
Sov.med. 21 no.5:109-112 My '57. (MLRA 10:7)

1. Iz fizioterapevticheskogo otdeleniya (nauchnyy rukovoditel' -  
prof. V.A.Ivanov) i endokrinologicheskogo otdeleniya (zav. - N.I.  
TSyganova) Moskovskoy gorodskoy klinicheskoy ordena Lenina bol'nitsy  
imeni S.P.Botkina (glavnyy vrach - prof. A.N.Shabanov)

(DIABETES MELLITUS, compl.  
polyneuritis, ther., inductothermy)  
(FEVER THERAPY, in various dis.  
inductothermy in diabetes mellitus)  
(POLYNEURITIS, etiol. and pathogen.  
diabetes mellitus, inductother.)

С.А.ИВАНОВ, ...

20574 С.А.ИВАНОВ, ... Исследования, проведенные в Казахстане. Инвестиция. ...  
SSR, No. 70, Серия ... вып. 11, 1949, с. 47-57. - Резюме на ... язык. - Библиография:  
14 назв.

80: БИОФИЗИЧЕСКИЙ СБОРНИК - Vol. 28, Москва, 1949

1. SHCHERBA, G. N.
2. USSR (600)
4. Rocks, Igneous - Altai Mountains
7. Concerning the article "Magma of small intrusions of the Altai." A. P. Nikol'skiy.  
Reviewed by G. N. Shcherba. Izv. SN SSSR. Ser. geol. No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.



SHYKHEBA, G. N.

"Experience Gained in the Study of the Internal Contacts of the Granite Massifs", Izv. An Kazakh SSR, Ser. Geol, No 17, 93-104, 1953 (Kazakhstani resume).

Using certain granite massifs of Central Kazakhstan and Altay as an example, the author generalizes the facts which are the proof for the diverse ages of the rocks of the massif: presence of sharp contacts, change of structure of younger rocks in contact with older rocks, nonconformity of the elements of prototectonics, gradual contact, intersection of lines of contact. (RZhGeol, No 5, 1954). SO: Sum. No. 443, 5 Apr. 55

SHCHERBA, G. N.

"Vulcanic Cupola of the Region of Leninogorsk," Izv. AN KazakhSSR, ser. geol., No 18, 42-49, 1954

On the basis of a study of the structure of dislocated Devonian vulcanic formations in the region of Leninogorsk in Rudnyy Altay, the author proposes the technical term "vulkanokupola" (vulcanic cupola) to designate the unique structures occurring as a result of the imposition of plicative and partly disjunctive deformations on primary cones of stratovolcanoes.

RZhGeol, No 1, 1955

SHCHERBA, G.N.

Fine-grained granites of certain massifs of Central Kazakhstan.

Izv.AN Kazakh.SSR.Ser.geol. no.19:146-151 '55.

(MLRA 9:8)

(Kazakhstan--Granite)

Shcherba, G. N.

15-1957-7-9176

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7,  
p 54 (USSR)

AUTHOR: Shcherba, G. N.

TITLE: Deep Mobile Zones of Central Kazakhstan (Glubinnyye  
podvizhnyye zony Tsentral'nogo Kazkhstana)

PERIODICAL: Izv. AN KazSSR, ser. geol., 1955, vol 20, pp 52-59

ABSTRACT: Five geological structural units are differentiated  
in central Kazakhstan, characterized by distinctive  
structural features during the period of their develop-  
ment from Precambrian to Mesozoic time. The author  
considers the central anticlinorium extremely impor-  
tant; it can be traced through Precambrian outcrops in  
Yeremantau, Atasu, Mointy, and Bulattau, and it sepa-  
rates two regions of different tectonic form and ore  
mineralization. The structural development of central  
Kazakhstan was controlled by deep mobile zones and by  
the mosaic pattern of the basement associated with

Card 1/2

15-1957-7-9176

Deep Mobile Zones of Central Kazakhstan (Cont.)

these zones. Mobile zones do not always appear at the surface; for the most part they are distinguishable because of elongated belts of contemporaneous intrusions, which may be traced for hundreds of kilometers. The deep mobile zones are divided into four age groups: early Caledonian, late Caledonian, early and middle Variscan, and late Viriscan. The occurrence of widespread mobile zones may be used in predicting endogenic mineralization. A map shows the distribution of several deep mobile zones of central Kazakhstan.

Card 2/2

A. L. Knipper

SHCHERBA, G.N.

Geological conditions of the formation of some stockworks and the  
zonality of mineralization. Izv.AN Kazakh.SSR.Ser.geol. no.21:  
3-13 '55. (MLRA 9:8)

(Ore deposits)

1236

15-57-4-4836

Metallogeny of Central Kazakhstan (Cont.)

Variscan, late Variscan, and Meso-Cenozoic. The most important stage for the development of rare metals is the late Variscan. Endogene deposits of vein quartz-greisen, skarn, and secondary quartzite formations were formed during this stage. Deposits of the vein quartz-greisen are of greatest importance. They are listed as follows: the Shalgiinskoye, the Karaoba, the Akchatauskoye, the Baynazarskoye, the Verkhne-Kayraktinskoye, the Zhanetskoye, and the Kounradskoye. The ore-bearing rocks of the late Variscan stage represent intrusions of leucocratic granites which formed small masses of complex structure. Most of the rare metals deposits (62 percent) were contained in granites. The following genetic classification of rare metals deposits is proposed for Central Kazakhstan: 1) endogene deposits: a-epimagmatic dispersions of mineralization in volcanic rock, b-pegmatite formation, c-skarn formation with a superimposed type of mineralization, d-vein quartz-greisen formation, e-formation of secondary quartzites; 2) exogene deposits: a-original sedimentary formation, b-deluvial, deluvial-proluvial, alluvial, and

Card 2/5

Metallogeny of Central Kazakhstan (Cont.)

15-57-4-4836

places of superimposition of later zones on the earlier ones and at the junction of zones. The principal rare-metal ore concentrations are associated with the junctions of mobile zones. Ores are localized either at the contact planes or in the various fissured zones; the latter may be of parallel, stockwork, ring, or interformational type. Many deposits are located on the end of sandstone-shale strata which are unconformed with the effusive-pyroclastic Devonian and Carboniferous overlying complexes. Zoning is observed in the complex deposits--tin and molybdenum ores are found closer to the sources of mineralization, while the tungsten deposits are located farther from the sources. A territory of 800 000 sq km was mapped for mineral potential on the basis of these investigations. Areas of mineral potential were distinguished on the basis of: 1) geological criteria; 2) actual distribution of deposits and of hydro-thermally altered rock carrying ore concentrates and metal-bearing aureolas. Four categories of areas were distinguished during the investigation. Basic directions of further exploration for rare

Card 4/5



Metallogeny of Central Kazakhstan (Cont.)

15-57-4-4836

metals in Central Kazakhstan should be: 1) continuation of exploration for the major deposits of rare metals; 2) organizing exploration for deposits of favorable genetic types located at the inter-sections of deep mobile zones; 3) geological surveys and exploration of other areas with mineral potential.  
Card 5/5

Ye. P. M.

SHCHERBA, G.N.

Paleozoic zone of deep tectonic movements in eastern  
Kazakhstan. Izv.AN Kazakh.SSR. Ser.geol. no.24:3-7  
'56.

(MLBA 10:2)

(Kazakhstan--Geology)

15-1957-10-13923

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10,  
p 80 (USSR)

AUTHOR: Shcherba G. N.

TITLE: An Example of the Relation Between Aplites and Quartz  
Veins (Odin iz primerov sootnosheniya aplitov i kvar-  
tsevykh zhil)

PERIODICAL: Izv. AN KazSSR, ser. geol. 1956, Nr 25, pp 20-26 (Summary  
in Kazakh)

ABSTRACT: The Kuu intrusive mass is located at the western end of  
a belt of intrusions associated with the Kuu-Kzyl-tau-  
Mamantasskaya deep mobile zone of central Kazakhstan,  
along which acid magmas were intruded in the middle Her-  
cynian and late Hercynian stages. The intrusive mass  
has a form approaching a flattened ellipsoid and its em-  
placement took place in three stages: 1) intrusion of  
porphyritic coarse-grained granites, forming the great-  
est areal extent of the mass; 2) intrusion of granitic  
magma in the central zone, with the formation of medium-  
grained granites; and 3) intrusion of fine-grained gran-

Card 1/3

15-1957-10-13923

An Example of the Relation Between Aplites and Quartz Veins

ites. After the fine-grained granites were emplaced, aplite dikes, pegmatites, and granite porphyry bodies were formed. There are interrelations among the dikes of aplite, pegmatite, and greisen, and the quartz veins. Aplites I are confined to three systems of steeply inclined fractures and are cut by the later aplites II, pegmatites, and quartz veins, and also by bands of mica-quartz greisen. Aplites II, confined to the same systems of fractures as aplites I, are distinguished from the first group by the rather high content of quartz and plagioclase. They intersect and displace dikes of aplites I, pegmatites, and high-temperature quartz veins. After the intrusion of the magma into the dikes of aplites II, there followed two generations of quartz veins. Postmineralization intrusive activity appears most extensive in the rare-metal deposits of Kuu and Shalgiy. At the Shalgiy deposit nine generations of hydrothermal veins have been identified. The origin of the subsequent series of granitic dikes--with their systematic association of aplites and pegmatites, and later of ore as well--is considered by the author to be the result of active magmatic

Card 2/3

SHCHERBA, G.N.; SERGIYEV, N.G., otvetstvennyy redaktor; RZHONKOVSKAYA, L.S.  
redaktor; ALFEROVA, P.F., tekhnicheskiiy redaktor

[Geology of the Naryn Range granitoids in Southern Altai] Geologiya  
Narynskogo massiva granitoidov na IUznom Altae. Alma-Ata, Izd-vo  
Akad.nauk Kazakhskoi SSR, 1957. 213 p. (MLA 10:7)

1. Chlen-korrespondent Akademii nauk KazSSR (for Sergiyev)  
(Naryn Range--Granitoids)

SHCHERBA, G.N.; YERMOLAYEV, K.Ye.; KAYUPOV, A.K.; KIM, V.A.; NIKITINA, L.G.;  
FLEROV, Ye.A.; SATPAYEV, K.I., akademik, red.; BOK, I.I., red.;  
SEMEANOVA, M.V., red.; POPOV, N.D., tekhn.red.

[Geology of the Leninogorsk and Zyryanovsk mine regions in the  
Altai Mountains] Geologiya Leninogorskogo i Zyrianovskogo  
rudnykh polei na Altae. Pod red.K.I.Satpaeva. Moskva, Gos.  
nauchno-tekhn.izd-vo lit-ry po geoli okhrane nedr, 1957. 370 p.  
(MIRA 11:1)

1. Akademiya nauk Kazakhskoi SSR, Alma-Ata.  
(Kazakhstan--Geology, Structural)

NOCHUMBA, G.K.

Defects in the scientific discussion on the Altai Mountains.

Izv. AN Kazakh. SSR Ser.geol. no.1.102-104 57. (Mina 10:7)

(Altai Mountains--Ore deposits)

SHCHERBA, A. N.

A few plutonic mobile belts in southwestern Altai. Izv. AN Kazakh  
SSR, Ser. geol. no.2 105-106 1957. (MLBA 10:8)  
(Altai Mountains--Geology, Structural)



SHCHERBA, G.N.

Concerning "New data" on the magmatic nature of the Cherdoiak region.  
Izv. AN Kazakh.SSR. Ser.geol.no.3:129-131 '57. (MIRA 10:10)  
(Naryn Range--Rocks, Igneous)

SATPAYEV, K.I.; BORUKAYEV, R.A.; AKHMEDSAFIN, U.M.; BOK, I.I.; KUSHEV, G.L.;  
SMIRNOV, N.G.; SHLYGIN, Ye.D.; SHCHERBA, G.N.; MONICH, V.K.;  
LOMONOVICH, I.I.; LAVROV, V.V.; MEDOYEV, G.TS.; NOVOKHATSKIY, I.P.;  
BARBOT-DE-MARNI, A.V.; GALITSKIY, V.V.; KOLOTILIN, N.F.; ZHILINSKIY,  
G.B.; KAYUPOV, A.K.; KAZANLI, D.N.; SATPAYEVA, T.A.; ABDULKABIROVA,  
M.A.; GAZIZOVA, K.S.; VEYTS, B.I.; KHAYRUTDINOV, D.Kh.; MUKHAMEDZHANOV,  
S.M.; CHOLPANKULOV, T.Ch.; PARSHIN, A.V.; TAZHIBAYEVA, P.T.; YANULOVA,  
M.K.; BYKOVA, M.S.; VOLKOV, A.N.; BOLGOV, G.N.; MITRYAYEVA, N.M.;  
CHOKABAYEV, S.Ye.; KUNAYEV, D.S.; YARENSKAYA, M.A.; REBROVA, T.I.

Tireless explorer of the depths of the earth's crust; on the 65th  
birthday and 40th anniversary of the scientific engineering ac-  
tivities of Academician M.P. Rusakov. Vest. AN Kazakh. SSR 13  
no.12:96-97 D '57. (MIRA 11:1)

(Rusakov, Mikhail Petrovich, 1892-)

3(5) PHASE I BOOK EXPLOITATION SOV/1886

Ob'edineniye nauchnaya sessiya po metallogenicheskim i prognomnym kartam, Alma-Ata, 1958.

Materialy nauchnoy sessii po metallogenicheskim i prognomnym kartam i doklady. (Materials Presented at the Scientific Session on Metallogenetic and Postulated Ore Occurrence Maps; Reports, Alma-Ata, Issued by AN Kazakhskoy SSR, 1958. 310 p. Errata slip inserted. 3,850 copies printed.)

Ed.: A.S. Pogozev; Tech. Ed.: P.Y. Alferova.

Sponsoring Agencies: (1) Vsesoyuznyy nauchnyy tsentr po metallogenicheskoy SSR, Alma-Ata, (3) USSR, Ministerstvo geologii i okhrany nedr, (4) Kazakh SSR, Ministerstvo geologii i okhrany nedr.

PURPOSE: This book is intended for exploration geologists, mining engineers, and cartographers.

Materials Presented (Cont.) SOV/1886

COVERAGE: This collection of reports was presented at the United Scientific Session on Metallogeny and Postulated Ore Occurrence Maps convoked by the Academy of Sciences in Alma-Ata in December, 1958. The reports deal with various aspects of compiling metallogenetic and ore occurrence maps as well as the methodology and techniques of correlating geophysical exploration data. These reports deal only with non-ferrous metals. Three other reports delivered at the conference but not included in this work were read by Ye.Ie. Zakharenko, M.S. Shatalov, and Yu.K. Goretzkiy. References accompany each article.

TABLE OF CONTENTS:

Materials Presented (Cont.)	SOV/1886
Duklin, N.V. [Ural'skiye GU MOON]. Principles of Compiling Metallogenetic Maps for the Magmatic Deposits of the Ural	80
Aliekhin, M.M., V.O. Pavlov, [Ural'skiye GU MOON]. Technique of Compiling of Copper and Iron Metallogenetic and Postulated Occurrence Maps for the Ural	88
Lazarev, P.V., I.V. Lennykh [GU MOON]. Copper and Nickel Postulated Occurrence Maps for Certain Districts of the Southern Ural	100
Ivankin, P.P., A.K. Karapov, and O.M. Shcherba. [AN Kazakh SSR]. Metallogenetic Postulated Occurrence Maps of Rudnyy Altay	110
Shcherba, O.M. Postulated Occurrence Maps for Rare Minerals in Central Kazakhstan	119
Bok, I.I., and L.A. Mironovichenko [ISSN AN Kazakh SSR]. Postulated Occurrence Maps of Central Kazakhstan and Guides for Predicting Their Occurrence and Exploration	131

Card 4/6

SHCHERBA, G.N.

Rare metals and genetic types of deposits in eastern Kazakhstan.  
Izv.AN Kazakh.SSR.Ser.geol. no.4:20-37 '58. (MIRA 12:4)  
(Kazakhstan--Ore deposits)

SOV/7-58-6-13/16

AUTHORS: Shcherba G. N., Ivanov, A. I.

TITLE: Discussion (Diskussiia) - On the Age of Some Granite Intrusions in Central Kazakhstan Bearing Rare Metals (Po povodu vozrasta nekotorykh redkometal'nykh granitnykh intruziy Tsentral'nogo Kazakhstana)

PERIODICAL: Geokhimiya, 1958, Nr 6, pp 607 - 609 (USSR)

ABSTRACT: L. V. Komlev, S. I. Danilevich, K. S. Ivanova and collaborators believe the intrusions of Akchatau, Maytas and Zhanet to have Postcaladonian but not Posthercynian age (Refs 1 and 2). The authors investigated these regions and carried out additional age determinations for Akchatau and Zhanet. The assumptions of L. V. Komlev and others are in contradiction to the geological conditions. In their investigations Komlev and his collaborators used age determinations according to the helium, lead and argon method which resulted in an average of 300 - 317 million years. A. I. Ivanov and N. I. Zamyatin on the other hand found in the Laboratoriya IGK AN Kaz.SSR according to the argon method 240 - 248 million years. Komlev's determination for Zhanet was 320 million years, the authors, however, find 207-243

Card 1/2

Discussion - On the Age of Some Granite Intrusions  
in Central Kazakhstan Bearing Rare Metals

SOV/7-58-6-13/16

million years (Table 2). The sequence in the region of  
Zhanet was investigated in detail by R. N. Mal'kova,  
V. P. Murav'yeva, V. L. Mel'nikova. There are 2 tables  
and 2 references. which are Soviet.

SUBMITTED: May 20 1958

Card 2/2

SATPAYEV, K.I.; POLOSUKHIN, A.P.; BAISHEV, S.B.; CHOKIN, Sh.Ch.; BORUKAYEV, R.A.;  
AKHMEDSAFIN, U.M.; KUSHEV, G.L.; SHCHERBA, G.N.; MONICH, V.K.; MEDOYEV,  
G.TS.; LAVROV, V.V.; BARBOT-DE-MARNI, A.V.; GALITSKIY, V.V.; ZHILINSKIY,  
G.B.; KAYUPOV, A.K.; KAZANLI, D.N.; KOLOTILIN, N.F.; MUKHAMEDZHANOV, S.M.;  
SATPAYEVA, T.A.; VEYTS, B.I.; GAZIZOVA, K.S.; CHOLPANKULOV, T.Ch.;  
PARSHIN, A.V.; BYKOVA, M.S.; MITRYAYEVA, N.M.; VOLKOV, A.N.; CHAKABAYEV,  
S.Ye.; YARENSKAYA, M.A.; KHAYRUTDINOV, D.Kh.

On the 60th anniversary of the birth of I.I. Bok, Academician of the  
Academy of the Kazakh S.S.R. Vest.AN Kazakh.SSR 14 no.10:95-96  
O '58. (MIRA 11:12)

(Bok, Ivan Ivanovich, 1898- )

БАНДАЛЕТОВ, С.М.; БЕСПАЛОВ, В.Ф.; БОГАТЫРЕВ, А.С.; БОК, И.И.; ГАЛИТСКИЙ,  
В.В.; ЗИЛИНСКИЙ, Г.Б.; ИВШИН, Н.К.; КАЗАНЛИ, Д.Н.; КАЙУПОВ,  
А.К.; КОНЕВ, А.К.; КУШЕВ, Г.Л.; ЛЯПИЧЕВ, Г.Ф.; МЕДОЙЕВ, Г.Т.;  
МОНИЧ, В.К.; МЯГКОВ, В.М.; НИКИТИН, И.Ф.; НОВОХАТСКИЙ, И.П.;  
САТПАЕВ, К.И.; ШЛЫГИН, Ye.D.; ШЧЕРБА, Г.Н.

Eminent geologist of Kazakhstan. Vest, AN Kazakh SSR 15 no.1:  
94-95 Ja '59. (MIRA 12:1)  
(Borukaev, Ramazan Aslanbekovich, 1899- )



AVRAM, P.Ya.; AYDILIN, Zh. A.; AUEZOV, M.O.; AKHMEDSATIN, U.M.; BATISHCHEV-  
 TARASOV, S.D.; BAZANOVA, N.H.; BAISHEV, S.B.; BAYKONUROV, A.B.;  
 BAKTUROV, A.B.; BOGATYREV, A.S.; BOK, I.I.; BOREKAYEV, R.A.; BUTLICHEN,  
 N.L.; BYKOVA, N.S.; ZHILINSKIY, G.B.; ZYKOV, D.A.; IVANKIN, P.F.;  
 KAZANLI, D.I.; KAYUPOV, A.K.; ~~ZENESBAYEV~~, S.K.; KOLOTILIN, N.P.;  
 KUNAYEV, D.A.; KUSHEV, G.L.; LAY, V.V.; MASHANOV, O.Zh.; MEDOVA,  
 G.TS.; MONICH, V.K.; MUKANOV, S.; MUSREPOV, G.; MUKHAMEDZHANOV, S.M.;  
 PARSHIN, A.V.; POPOVSKIY, S.M.; POLOSUKHIN, A.P.; RUSANOV, M.P.;  
 SERGIYEV, N.B.; ~~SEYFULLIN~~, S.Sh.; TAZHIBAYEV, P.T.; ESEMKOV, T.G.;  
 SHLYGIN, Ye.D.; SHCHERBA, G.N.; CHOKIN, Sh.Ch.; CHOLPANKULOV, T.Ch.

Sixtieth birthday of Academician Kanysh Iwantaevich Satpaev. Vest.  
 AN Kazakh, SSR 15 no. 4: 58-61 Ap '69. (MIRA 12:7)  
 (Satpaev, Kanysh Iwantaevich, 1890-)

SHCHERBA, Grigoriy Nikiforovich; AYTALIYEV, Zh.A., otv.red.;  
RZHONDKOVSKAYA, L.S., red.; ALFEROVA, P.F., tekhn.red.

[Formation of rare metal deposits in central Kazakhstan]  
Formirovaniye redkometal'nykh mestorozhdenii TSentral'nogo  
Kazakhstana. Alma-Ata, Izd-vo Akad.nauk Kazakhskoi SSR,  
1960. 373 p. (MIRA 14:1)

1. Chlen-korrespondent AN KazSSR (for Aytaliyev).  
(Kazakhstan--Metals, Rare and minor)

SHCHERBA, G.N.; KUDRYASHOV, A.V.

One of the criteria of genetic association in ore formation. Izv.  
AN Kazakh.SSR.Ser.geol. no.3:116-119 '60. (MIRA 13:11)  
(Feldspar--Optical properties)

SRONIN, G.N.

Rare-metal belts. Dokl.razn.polezn.iskop. 3:511-519 '80.  
(MIRA 1:113)

1. Institut geologicheskikh nauk AN Kazakhskoy SSR.  
(Kazakhstan - Metals, Rare and minors)

SHCHERBA, G.N.

Conference on the metallogeny of the Pacific ore belt. Izv. AN  
Kazakh. SSR. Ser. geol. no.1:80-85 '61. (MIRA 14:6)  
(Soviet Far East—Ore deposits)

SHOKHBA, G.N., KOLMAGOROV, Yu.A.; KUMINGVA, M.V.; MIROSHNICHENKO, L.A.

Subsurface mobile zones in central Kazakhstan. Izv. AN Kazakh.  
SSR.Ser.geol. no.1:8-22 '02. (MIRA 15:5)  
(Kazakhstan--Geology, Structural)

SHCHERBA, G.N., POPOV, A.A.

Some data on the thickness of the earth's crust in the southern  
part of eastern Kazakhstan. Izv. AN Kazakh. SSR. Ser-geol.  
no. 3-13-27 '62. (MIRA 15:7)

(Kazakhstan--Earth--Surface)

SHCHERBA, G.N.

Some problems in prospecting for hidden W. Mo, Bi deposits as  
revealed by prospecting in central Kazakhstan. Izv. AN Kazakh.SSR  
Ser.geol. no. 6:5-12 '62. (MIRA 16:5)  
(Kazakhstan--Ore deposits) (Kazakhstan--Prospecting)



MITRYAYEVA, N.M.; KOZHNOV, A.A.; SHCHERBA, G.N.

Genesis of complex metal ores of the Atasu region (central  
Kazakhstan). Izv. AN Kazakh.SSR. Ser.geol. no.6:53-64  
'62. (MIRA 16:5)  
(Atasu region—Ore deposits)

SHCHERBA, G.N.; YERSHOV, B.V.; IVANOV, A.I.; KUDRYASHOV, A.V.;  
SENCHILO, N.P.

Possible Mesozoic age of the Khorgos intrusive complex in the  
Dzungarian Ala-Tau. Trudy Inst.geol.nauk AN Kazakh.SSR 6:226-236  
'62. (MIRA 16:6)

(Dzungarian Ala-Tau--Geological time)

SECHERBA, G.N.

All-Union Conference on the Ore Potential of Volcanic Sedimentary Formations. Izv. AN Kazakh SSR, Ser. geol. nauk no. 4:111-112 '63. (MIRA 16:9)

1. Institut geologicheskikh nauk AN Kazakhskoy SSR, Alma-Ata.

SHCHERBA, G.N., doktor geologo-mineralog. nauk

Frequent types of relations between mineralization and magmatic processes. Vest. AN Kazakh. SSR 20 no.9:17-20 S '64.

(MIRA 17:10)

SATPAYEV, K.I. [deceased]; SHCHERBA, G.N.

Methods and basic results of the combined investigation of the  
Uspensk mobile depth zone in central Kazakhstan. Izv. AN Kazakh.  
SSR. Ser. geol. 21 no.3:3-10 My-Je '64. (MIRA 17:11)

1. Institut geologicheskikh nauk im. K.I. Satpayeva AN KazSSR,  
Alma-Ata.

SHCHERBA, Grigoriy Vikiiforovich, prof., doktor geol.-mineral. nauk,  
zasluzhennyy deyatel' nauki KazSSR, GUKOVA, Vera Dmitriyevna;  
KUDRYASHOV, Arkadiy Vasil'yevich; SENCHILO, Nikolay  
Panteleyevich; NESTEROVA, I.I., red.

[Greisens, vein quartz, and potassic feldspar in molybdenum-  
tungsten deposits of Kazakhstan.] Greizeny, zhil'nyi kvarts i  
kalishpaty molibdeno-vol'framovykh mestorozhdenii Kazakhstana.  
Alma-Ata, 1964. 306 p. (Akademiia nauk Kazakhskoi SSR. Institut  
geologicheskikh nauk. Trudy, vol.8) (MIRA 17:6)

SHCHERBA, G.H., doktor geologo-mineralogicheskikh nauk; MILOSHINICHENKO, L.A.,  
kand. geologo-mineralog. nauk

Endogenic ore formations of Siberia and the Far East. Vest. AN  
Kazakh. SSR 20 n. 7:85-86 J1 '64. (MIRA 17:11)

SHCHERBA, G.N.

Some characteristics of studying Atasu-type deposits. Izv. AN  
Kazakh. SSR. Ser. geol. 21 no.5:15-33 S-O '64.

(MIRA 18:5)

1. Institut geologicheskikh nauk im. Satpayeva AN KazSSR, Alma-Ata.



... of the ...  
... (MIA 18:8)  
... Alaska ...

SHISHKIN, M. Ya.; SHCHERBA, G.N.

Reviews and bibliography. Zap. Vses. min. ob-va 94 no.4:477-  
481 '65. (MIRA 18:9)

1. Nauchno-issledovatel'skiy i proyektnyy institut "Gipronikel",  
Leningrad (for Shishkin). 2. Leningradskoye otdeleniye  
Matematicheskogo instituta AN SSSR imeni Steklova (for Demina).

Shcherba, I.A.

10  
S/169/63/000/003/006/042  
D263/D307

AUTHORS:

Aleksseyev, P.P., Besyadovskiy, Ye.A., Biryukova, L.A.,  
Golyshev, G.I., Ivanovskiy, A.I., Izakov, M.M.,  
Kokin, G.A., Kurilova, Yu.V., Livshits, N.S., Petrov,  
A.A., Rozhdestvenskiy, B.G., Solov'yev, N.V., Speran-  
skiy, K.Ye., Khvostikov, I.A., Shvidkovskiy, Ye.G.  
and Shcherba, I.A.

TITLE:

Study of the upper layers of the atmosphere with the  
aid of meteorological rockets

PERIODICAL:

Referativnyy zhurnal, Geofizika, no. 3, 1963, 28,  
abstract 3.1166 (Tr. Vses. nauchn. Meteorol. sovesh-  
chaniya. T.I.L., Gidrometeoizdat, 1962, 91-103)

TEXT:

In the present review-type article the authors give  
the results of studies carried out at Tsentralnaya aerologicheskaya  
observatoriya (Central Aerological Observatory) on atmospheric sound-  
ing with meteorological rockets. Measuring methods are described and  
the main points are given for obtaining such atmospheric character-

Card 1/2

Study of the upper layers ...

S/169/63/000/003/006/042  
D263/D307

istics as pressure, temperature, and wind. Certain results are given: data of seasonal temperature variations at heights up to 50 km in the middle latitudes of the USSR and in polar regions, cases of sudden warming up, characterization of temperature distribution curves, a table characterizing the temperature inversion below the stratopause under the conditions of polar night, and data regarding the circulation in the upper atmospheric layers. Information is given on the constructed meridional sections of temperature fields and on the zonal component of the gradient wind. (25 references).

[Abstracter's note: Complete translation]

Card 2/2

LUK'YANOV, A.V.; SHCHERBA, I.G.

Overthrust in the region of Kenebek-Zhondytau Mountains in central  
Kazakhstan. Izv. AN SSSR. Ser.geol. 26 no.8:105-109 Ag '61.  
(MIRA 14:9)

1. Geologicheskiy institut AN SSSR, Moskva.  
(Kazakhstan--Faults (Geology))

KOPTOVA, V.V.; SHCHERBA, I.G.

Some characteristics of the magmatic penetration zones  
in the Northern Balkhash Synclinorium. Trudy GIN no.80:  
275-311 '63. (MIRA 17:6)

PETROV, K. A., NIFANT'YEV, E. Ye.; KHORKHOYANU, L. V.; SHCHERBA, I. G.

Phosphites and phosphinites of triols and their derivatives. Zhur.ob.  
khim. 34 no.1:70-77 Ja '64. (MIRA 17:3)

SHCHERBA, I.I., aspirant

Designing a seven-bar lever mechanism with a circular discontinuous motion of the follower having a given degree of the angular deviation during its function period. Izv. vys. ucheb. zav.; mashinostr. no.8: 10-15 '65. (MIRA 18:10)



STONERBA, I.I., assistant

Designing a seven-bar crank linkage with a circular  
intermittent motion of the follower and a most favorable  
transmission angle. Izv. vys. ucheb. zav.; mashinostr.  
no. 10:5-19 '65 (MIRA 19:1)

1. Submitted February 29, 1964.

ELYUN, I.A.; DUSHINA, T.K.; SEMENOVA, T.V.; SHCHERBA, I.Ya

Determination of boron with crystal violet. Zav.lab. 27  
no.6:644-650 '61. (MIRA 14:6)

1. Kazakhskiy institut mineral'nogo syr'ya, TSentral'naya  
laboratoriya Chelyabinskogo geologicheskogo tresta i TSentral'naya  
laboratoriya Yuzhno-Kazakhstanskogo geologicheskogo upravleniya.  
(Boron--Analysis) (Crystal violet)

SHCHERBA, h. D.

Distr: 4E1d/4E4j

27  
Preparation of silver chloride windows for cells. L. D. Shcherba and T. V. Yakovleva. *Priroda i Tekh. Eksperimenta* 1956, No. 3, 101. — A simple method for the prepn. of AgCl windows for obtaining infrared absorption spectra is offered. AgCl was pptd. from AgNO<sub>3</sub> and then filled into 20 cc. Pyrex glass ampuls, which were placed into muffles, slowly heated to 480°, and held there for 40–50 min. Then, in the course of 10–12 hrs. the temp. was very slowly lowered to 120–50°. Under such conditions relatively large AgCl crystals are formed. The cooled mass is removed from the glass mechanically and washed with HNO<sub>3</sub> and H<sub>2</sub>O. The transparent mass is then pressed in Cr-plated molds. During 15–20 min. the pressure is gradually increased to 2000 atm. After release of pressure the mass is heat-treated at 100° for 2–3 hrs. The pressure is then slowly increased to 350 atm., held for 10–12 hrs., and gradually released. Transparency of the product is 70–80%. Av. crystal size is 0.5 mm. E. Ryshkewitch

4  
2

1/1

om Row

AUTHORS: Denisova, I. V. Shalaska, A. P. SCV 48-22-9-30/40

TITLE: Modifications in the Infrared Spectrum of Ammonia at the Transition From the Gaseous to the Liquid State (Izmeneniye v infrakrasnom spektre ammiaka pri perekhode iz gazo-obraznogo v zhidkoye sostoyaniye)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1958, Vol 22, Nr 9, pp 1122 - 1124 (USSR)

ABSTRACT: This is an investigation of the infrared spectrum of liquid ammonia and of ammonia solution in carbon tetrachloride. The spectra were taken with the spectrometer NKC-11, using LiF and NaCl prisms. The spectrum of liquid ammonia was recorded in the range  $2 \div 15\mu$  at  $-50^{\circ}$ . The spectrum of the ammonia solution was only obtained in the range of the N-H valence oscillations. Synthetic ammonia was used in the experiments, which was dried by condensation above metallic sodium. On the basis of the conceived hydrogen binding in ammonia, greater modifications had to be expected in the spectrum of the liquid, that is to say the occurrence of a new band connected with the disturbed N-H oscillation

Card 1/2

Modifications in the Infrared Spectrum of Ammonia  
at the Transition From the Gaseous to the Liquid State

SOV/48-22-9-30/40

and a decrease of the degeneration of the inequality of the three NH bindings. Actually no essential modifications were observed in the infrared spectrum with the exception of a strong increase of the relative intensity of the  $\nu_3$  band and a comparatively great displacement of the band (Table). This result can be explained by the assumption of an interaction between all three NH bindings of a molecule with the free pair of the other molecule. In such a case the NH bindings are all equivalent. For this conception, however, the formation of non-linear hydrogen bond is a prerequisite. There are 3 figures, 1 table, and 10 references, 2 of which are Soviet.

ASSOCIATION: Gos.institut prikladnoy khimii (State Institute of Applied Chemistry)

Card 2/2

25(6)

SOV/64-59-1-11/24

AUTHORS:

Vanyushina, Z. S., Vilesova, M. S., Shcherba, L. D.

TITLE:

Control of the Hydrogenation of Adiponitrile and of the Purification of Hexamethylenediamine by the Method of Infrared Spectroscopy (Kontrol' gidrirovaniya adiponitrila i ochistki geksametilen-diamina metodom infrakrasnoy spektroskopii)

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 1, pp 46-48 (USSR)

ABSTRACT:

At the Gosudarstvennyy institut prikladnoy khimii (State Institute of Applied Chemistry) an analytic method was developed which served the examination of the reaction mixture in the continuous hydrogenation of adiponitrile (I) (Ref 1) during the synthesis of hexamethylenediamine (II). This analysis takes, however, 2.5 - 3 hours. For a faster determination of the conversion of (I) in the hydrogenation the spectrometry by the  $-C\equiv N$  group is suggested for the present case. The purity of (II) is particularly important for the production of nylon. It is stated that a judgment of the purity of (II) by the freezing temperature is inadequate, and that a perfect judgement is only possible on the basis of an infrared spectrum analysis in which no absorption band

Card 1/2

SOV/64-59-1-11/24  
Control of the Hydrogenation of Adiponitrile and of the Purification of  
Hexamethylenediamine by the Method of Infrared Spectroscopy

of the  $\text{--C}\equiv\text{N}$  group may be observed and in which the groups  $\text{NH}$  and  $\text{NH}_2$  appear. It is recommended to carry out the rectification of raw (II) on a rectification column (under vacuum and in nitrogen atmosphere). From the fraction  $T_z = 40.0^\circ\text{C}$  a control by the infrared spectrum by means of any spectrometer (e.g. IKS-11) should be carried out whereby the required rectification conditions can be established. 3 examples are given in which a column with an efficiency of about 15 theoretical bottoms in nitrogen atmosphere was applied. Results of examinations of the freezing temperature of the individual samples are indicated (Table). There are 1 table and 9 references, 1 of which is Soviet.

Card 2/2

66850

SOV/76-33-11-3/47

5:4/30

~~5(4)~~

AUTHORS:

Shcherba, L. D., Sukhotin, A. M.

TITLE:

Study of the Hydration of Ions by Means of Infrared Absorption Spectra

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 11, pp 2401-2404 (USSR)

ABSTRACT:

Investigations (Refs 1,2,5,7) of an absorption band shift at  $4.7\mu$  by dissolution of salts in water show that the shift increases with rising salt concentration. Ions with a small radius have an effect on the absorption band similar to a temperature drop and ions with a larger radius act on it like a temperature rise, which is in agreement with Bernal's and Fauler's findings (Ref 10). Waldron (Ref 8) studied the effect of dissolved salts on the infrared spectrum of HDO. In the present case the influence exercised by  $\text{LiClO}_4$ ,  $\text{LiJ}$ ,  $\text{NaJ}$ ,  $\text{Mg}(\text{ClO}_4)_2$ ,  $\text{MgJ}_2$ ,  $(\text{iso-C}_5\text{H}_4)_4\text{NJ}$ , and butyl quinoline iodide in a small quantity of water dissolved in acetonitrile ( $\text{H}_2\text{O}$  and  $\text{D}_2\text{O}$ ) on the infrared spectrum was investigated. The authors

Card 1/2



66850

SOV/76-33-11-3/47

Study of the Hydration of Ions by Means of Infrared Absorption Spectra

studied solutions of water and of the salts in the concentration range 0.01-0.1 mol, as the salts are practically completely dissociated at these concentrations and the water is associated with acetonitrile in the form of a monomer. The spectra were taken on the spectrometer IKS-11 (with an LiF prism) in the ranges 3300-3800  $\text{cm}^{-1}$  (for  $\text{H}_2\text{O}$ ) and 2400-2800  $\text{cm}^{-1}$  (for  $\text{D}_2\text{O}$ ).

It was found that in the spectra of salt solutions one may observe, besides the valency absorption bands of dissolved free water, new bands shifted toward lower frequencies, which are assigned to  $\text{H}_2\text{O}$  molecules penetrated into the solvate envelope of the cations. This shift is explained by the polarization of the  $\text{H}_2\text{O}$  molecules. Consequently it depends on the polarizability of the ions, it decreases in the order  $\text{Mg}^{2+}$ ,  $\text{Li}^+$ ,  $\text{Na}^+$ ,  $(\text{C}_5\text{H}_{11})_4\text{N}^+$  and is 120, 83, 103 and 108  $\text{cm}^{-1}$ . Salts of the quaternary ammonium bases the cations of which have a lesser tendency to hydration do not cause the abovementioned effect. There are 4 figures and 10 references, 2 of which are Soviet.

Card 2/2

SHCHERBA, M. I.

DECEASED

1964

KIDNEYS - DISEASES

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1. Iz kafedry fakul'tetskoy terapii (zav. - zasluzhennyy deyatel' nauki prof. T.S.Istamanova) i kafedry propedevtiki vnutrennikh bolezney (zav. - prof. M.L.Shcherba) I Leningradskogo meditsinskogo instituta imeni akademika I.P.Pavlova.